UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,645	01/16/2001	Erik Walles	2466-86	2249

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EXAMINER
TON, ANTHONY T

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/759,645	WALLES, ERIK
	Examiner	Art Unit	
	Anthony T Ton	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 September 2004</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-61</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-12, 14-40, and 42-61</u> is/are rejected.

7)☒ Claim(s) <u>13 and 41</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.
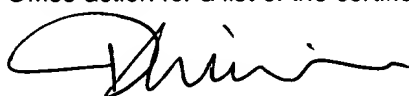
Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>16 January 2001</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

PHIRIN SAM
PRIMARY EXAMINER

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Drawings

1.   New formal drawings are required in this application because **Figs. 1, 3** and **4** are in

handwriting. Applicant is advised to employ the services of a competent patent draftsperson

outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings.

The formal drawings are required in reply to the Office action to avoid abandonment of the

application. The requirement for corrected drawings will not be held in abeyance.

Specification Objections

2.   The disclosure is objected to because of the following informalities:

a) term "the sub-functions preselected in step **206**" in page 11 line 6 is not associated

with step 208 in Fig. 2.

Examiner suggests changing this term to "the sub-functions preselected in step **208**".

b) term "requiring 50 instructions;, and" in page 12 line 6 is improper for the comma ",";

this comma should be deleted.

Examiner suggests changing this term to "requiring 50 instructions; and".

Appropriate correction is required.

Claim Objections

3.   Claim 3 is objected to because of the following informalities:

term "subfunctions; **and**," in line 3 is improper for "and," because another "and" has

been cited in line 5.

Examiner suggests changing this term to "subfunctions;".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   **Claims 1-5, 8-12, 14, 17-20, 29-33, 36-40, 42, 45-48, 60 and 61** are rejected under 35

U.S.C. 103(a) as being unpatentable over *Anderson et al.* (US Patent No. **5,628,013**) hereinafter

referred to as *Anderson*, in view of *Witte et al.* (US Patent No. **5,655,120**) hereinafter referred to

as *Witte.*

a) **In Regarding to Claims 1** and **29**: *Anderson* disclosed a method and a processor of

processing speech information in a communication network in which pieces of speech

information are transmitted in packets or slots or frames *(see Figs.3 and 4)*, the method

comprising:

performing plural subfunctions, each of the subfunctions having different priority and

differently influencing quality of the transmitted information with different degrees of severity or

importance *(see Figs. 5-7 and col.9 lines 7-63);*

for a given instant and for a piece of information, calculating a measure of total

processing required *(see col.3 lines 38-49)*;

comparing the measure of total processing required to total processing capability for

handling the transmitted information at the given instant *(see col.8 lines 15-40)*;

Anderson fails to explicitly disclose when the total processing required exceeds the total

processing capability, performing a subset of the plural subfunctions on priority.

Witte explicitly discloses such when the total processing required exceeds the total

processing capability, performing a subset of the plural subfunctions on priority basis *(see col.3*

line 63 – col.4 line 37).

At the time of the invention, it would be obvious to a person of ordinary skill in the art to

combine such when the total processing required exceeds the total processing capability,

performing a subset of the plural subfunctions on priority basis, as taught by *Witte* with

Anderson, in order to determine whether there is enough processing time available within a

frame to process a task. The motivation for doing so would have been to support different data

rates, different types of communication information, and prevent a processing time not exceeded

a total processing time. Therefore, it would have been obvious to combine *Witte* with *Anderson*

in the invention as specified in the claims.

b) **In Regarding to Claims 2** and **30:** *Anderson* further disclosed the method further

comprising performing, as the subset, certain subfunctions which influence the transmitted

information with a low degree of severity or a high degree of importance *(see col.6 lines 19-34:*

module functions; and col.13 lines 20-50: DSP functions and scaling vectors).

c) **In Regarding to Claims 3** and **31:** *Anderson* further disclosed the method further

comprising for the given instant calculating the processing required by the subset of

subfunctions;

determining processing capability remaining after performing the subset *(see col.8 lines*

15-25); and

performing subfunctions different from the subset according to the calculated remaining

processing capability *(see col.9 line 64 – col.10 line 14).*

          d) **In Regarding to Claims 4** and **32**: *Anderson* further disclosed the method further

comprising:

          sending the information in the network in a plurality of parallel channels having different

priority levels *(see col.6 lines 36-48);*

          processing the information in each channel *(see col.6 lines 48-60)*;

          at the given instant calculating the measure of the total processing required for all of the

parallel channels *(see col.6 line 61 – col.7 line 13);*

          comparing the total processing required for all of the parallel channels to the total

processing capability *(see col.8 lines 15-26)*; and

          Anderson fails to explicitly disclose when the required processing required exceeds the

total processing capability, performing more subfunctions for channels having a high priority

level than for channels having a low priority level.

          Witte explicitly discloses such when the required processing required exceeds the total

processing capability, performing more subfunctions for channels having a high priority level

than for channels having a low priority level *(see col.3 line 36 - col.4 line 42; and see col.7 lines

15-18).*

          At the time of the invention, it would be obvious to a person of ordinary skill in the art to

combine such when the required processing required exceeds the total processing capability,

performing more subfunctions for channels having a high priority level than for channels having

a low priority level, as taught by *Witte* with *Anderson*, in order to determine whether there is

enough processing time available within a frame to process a task. The motivation for doing so

would have been to support different data rates, different types of communication information,

and prevent a processing time not exceeded a total processing time. Therefore, it would have

been obvious to combine *Witte* with *Anderson* in the invention as specified in the claims.

e) **In Regarding to Claims 5** and **33**: *Anderson* disclosed all aspects of these claims as

set forth in claims 1 and 29, respectively.

Anderson failed to explicitly disclose the algorithm comprises an echo cancellation

algorithm. However, *Anderson* inherently disclosed an echo cancellation algorithm because

Anderson explicitly disclosed a smooth algorithm as shown in Fig.7. Some examples of smooth

algorithms include algorithms for implementing Finite Input Response and Infinite Input

Response filters, equalizers, and <u>echo processors</u>, etc. *(see col. 9 lines 10-25).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention was made to implement such an echo processors of *Anderson* for a purpose of noise

echo canceling, the motivation being to cancel reflection of sound waves during a telephone

communication.

f) **In Regarding to Claims 8** and **36**: *Anderson* further disclosed the method further

comprising for the given instant, always performing preselected ones of the subfunctions for

each channel, the preselected ones of the subfunctions being selected to require processing not

exceeding the total processing capability *(see col.8 lines 15-26).*

g) **In Regarding to Claims 9** and **37**: *Anderson* further disclosed the method further

comprising performing, for the given instant, remaining subfunctions not included in the

preselected subfunctions in accordance with total processing left after performing the preselected

ones of the subfunctions *(see col.19 lines 5-25).*

h) **In Regarding to Claims 10** and **38**: *Anderson* further disclosed the method further comprising determining the processing required by each of the subfunctions as a number of processor instructions used by the subfunction *(see col.7 lines 13-20: GPB actual register; and col.8 line 40 – col.9 line 6: when processing times are described, it is a reference to DSP instruction cycles (hence each of the subfunctions is determined as the number of processor instructions used by the subfunction))*.

i) **In Regarding to Claims 11** and **39**: *Anderson* further disclosed the method further comprising basing a number of parallel channels in which information is sent in the communication network is on an average of the processing required *(see col.1 lines 38-48)*.

j) **In Regarding to Claim 12**: the claimed subject matters of a method disclosed in claim 12 are the same as that of the method recited in claim 1, except for a claimed subject matter: when the total processing required exceeds the total processing capability, performing more of the subfunctions for channels having a high priority level than for channels having a low priority level.

Anderson fails to explicitly disclose such a claimed subject matter.

Witte explicitly discloses such when the required processing required exceeds the total processing capability, performing more of the subfunctions for channels having a high priority level than for channels having a low priority level *(see col.3 line 36 - col.4 line 42; and see col.7 lines 15-18)*.

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such when the required processing required exceeds the total processing capability, performing more of the subfunctions for channels having a high priority level than for channels

having a low priority level, as taught by *Witte* with *Anderson*, in order to determine whether

there is enough processing time available within a frame to process a task. The motivation for

doing so would have been to support different data rates, different types of communication

information, and prevent a processing time not exceeded a total processing time. Therefore, it

would have been obvious to combine *Witte* with *Anderson* in the invention as specified in the

claim.

      k) **In Regarding to Claim 14** and **19**: all of the claimed subject matters of these claims

are the same as that of claims 5 and 10, respectively, except for a difference that was described in

the claim 12 above. Therefore, the rejection of Anderson and Witte as applied to Claims 5 and 10

would also apply to Claims 14 and 19, respectively.

      l) **In Regarding to Claim 17**: *Anderson* further disclosed the method further comprising

for the given instant, always performing preselected ones of the subfunctions for each channel,

the preselected ones of the subfunctions being selected to require processing not exceeding the

total processing capability *(see col.8 lines 15-26)*.

      m) **In Regarding to Claim 18**: *Anderson* further disclosed the method further

comprising performing, for the given instant, remaining subfunctions not included in the

preselected subfunctions in accordance with total processing left after performing the preselected

ones of the subfunctions *(see col.19 lines 5-25)*.

      n) **In Regarding to Claim 20**: *Anderson* further disclosed the method further comprising

determining the processing required by each of the subfunctions as a number of processor

instructions used by the subfunction *(see col.7 lines 13-20: GPB actual register; and col.8 line*

40 – col.9 line 6: when processing times are described, it is a reference to DSP instruction cycles

(hence each of the subfunctions is determined as the number of processor instructions used by

the subfunction)).

o) **In Regarding to Claims 40, 42** and **45-48**: these claims are rejected for the same

reasons as Claims 12, 14 and 17-20, respectively because the claimed subject matters of the

processor in Claims 40, 42 and 45-48 are the same as the subject matters of the method in Claims

12, 14 and 17-20, respectively.

p) **In Regarding to Claims 60 and 61**: all of claimed subject matters of these claims

have been disclosed in claims 12 and 14, except for an execute program stored in a memory.

However, Anderson also explicitly discloses such an execute program *(see Fig.2)*. Therefore, the

rejections to the claims 12 and 14 would apply to reject these claims as well.

6.   **Claims 6, 7, 15, 16, 34, 35, 43, 44** and **57-59** are rejected under 35 U.S.C. 103(a) as

being unpatentable over *Anderson et al.* (US Patent No. **5,628,013**) in view of *Witte et al.* (US

Patent No. **5,655,120**), as applied to claims 1 and 5; 12 and 14; and 29 and 33 above, and further

in view of *the Admitted Prior Art Fig.1*, hereinafter referred to as *the Admitted Prior Art*.

a) **In Regarding to Claims 6** and **34**: *Anderson* disclosed all aspects of these claims as

set forth in claims 1 and 5; claims 29 and 33; respectively.

Anderson fails to explicitly disclose wherein the echo cancellation algorithm function is

divided into at least one of: filtering, filter updating, double-talk detection, non-linear

processing, noise estimation, and network probing.

the Admitted Prior Art disclosed such appropriate components corresponding to such

filtering, filter updating, double-talk detection, non-linear processing, noise estimation, and

network probing. *(see Fig.1 Prior Art: blocks 102, 118, 104, 106, and 120, respectively).*

At the time of the invention, it would be obvious to a person of ordinary skill in the art to

combine such an echo cancellation algorithm function is divided into at least one of: filtering,

filter updating, double-talk detection, non-linear processing, noise estimation, and network

probing, as taught by *the Admitted Prior Art* with *Anderson*, in a purpose of noise echo canceling

during a telephone communication. The motivation for doing so would have been to provide the

process of *Anderson* with an echo cancellation in a communications or acoustic system.

Therefore, it would have been obvious to combine *the Admitted Prior Art* with *Anderson* in the

invention as specified in the claims.

b) **In Regarding to Claims 7** and **35**: *Anderson* disclosed all aspects of these claims as

set forth in claims 1, 5 and 6; claims 29, 33 and 34; respectively.

Anderson fails to explicitly disclose the subfunctions of filtering, non-linear processing,

filter updating, double talk detection, noise estimation, and network probing, taken in this

sequential order, are assigned degrees of severity or importance in decreasing and increasing

scales respectively.

However, it would have been an obvious matter of design choice to take in a sequential

order for a process of echo canceling, since such a modification would have involved a mere

change in a sequential order of a process. Based on the priority of an information for a

sequential order of a process is generally recognized as being within the level of ordinary skill in

the art.

c) **In Regarding to Claims 15** and **16**: all of the claimed subject matters of these claims are the same as that of claims 6 and 7, respectively, except for a difference that was described in the claim 12 above. Therefore, the rejections to Claims 6 and 7 would apply to reject Claims 15 and 16, respectively.

d) **In Regarding to Claims 43** and **44**: these claims are rejected for the same reasons as Claims 15 and 16, respectively because the claimed subject matters of the processor in Claims 43 and 44 are the same as the subject matters of the method in Claims 15 and 16, respectively.

e) **In Regarding to Claims 57-59**: all of claimed subject matters of these claims have been disclosed in claims 1, and 5-7, except for an echo canceller. However, *the Admitted Prior Art* explicitly discloses such an echo canceller. Therefore, the rejections to the claims 1, and 5-7 would apply to reject these claims as well.

7.   **Claims 21, 22, 25-28, 49, 50** and **53-56** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Anderson et al.* (US Patent No. **5,628,013**) in view of *Witte et al.* (US Patent No. **5,655,120**), as applied to claims 1 and 12 above, and further in view of *Paneth et al.* (US Patent No. **5,121,391**) hereinafter referred to as *Paneth*.

a) **In Regarding to Claim 21**: the claimed subject matters of a method disclosed in claim 21 are the same as that of the method in claim 12, except for a claimed subject matter: performing some subfunctions for the channels in accordance with a round robin scheme.

Paneth explicitly discloses such a round robin scheme *(see col.31 lines 50-54)*.

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such a round robin, as taught by *Paneth* with *Anderson*, in a purpose of a fair service to

subscribers in a communication network. The motivation for doing so would have been to

provide a first-in first-out (FIFO) process and operate a communication system more easily

because less process. Therefore, it would have been obvious to combine *Paneth* with *Anderson*

in the invention as specified in the claim.

b) **In Regarding to Claim 22**: *Anderson* disclosed all aspects of these claims as set forth

in claim 21.

Anderson failed to explicitly disclose the algorithm comprises an echo cancellation

algorithm. However, *Anderson* inherently disclosed an echo cancellation algorithm because

Anderson explicitly disclosed a smooth algorithm as shown in Fig.7. Some examples of smooth

algorithms include algorithms for implementing Finite Input Response and Infinite Input

Response filters, equalizers, and echo processors, etc. *(see col. 9 lines 10-25)*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention was made to implement such an echo processors of *Anderson* for a purpose of noise

echo canceling, the motivation being to cancel reflection of sound waves during a telephone

communication.

c) **In Regarding to Claim 25**: *Anderson* further disclosed the method further comprising

for the given instant, always performing preselected ones of the subfunctions for each channel,

the preselected ones of the subfunctions being selected to require processing not exceeding the

total processing capability *(see col.8 lines 15-26)*.

d) **In Regarding to Claim 26**: *Anderson* further disclosed the method further comprising

performing, for the given instant, remaining subfunctions not included in the preselected

subfunctions in accordance with total processing left after performing the preselected ones of the

subfunctions *(see col.19 lines 5-25)*.

e) **In Regarding to Claim 27**: *Anderson* further disclosed the method further comprising

determining the processing required by each of the subfunctions as a number of processor

instructions used by the subfunction *(see col.7 lines 13-20: GPB actual register; and col.8 line*

40 – col.9 line 6: when processing times are described, it is a reference to DSP instruction cycles

(hence each of the subfunctions is determined as the number of processor instructions used by

the subfunction)).

f) **In Regarding to Claim 28**: *Anderson* further disclosed the method further comprising

basing a number of parallel channels in which information is sent in the communication network

is on an average of the processing required *(see col.1 lines 38-48)*.

g) **In Regarding to Claims 49, 50** and **53-55**: these claims are rejected for the same

reasons as Claims 21, 22 and 25-27, respectively because the claimed subject matters of the

processor in Claims 49, 50 and 53-55 are the same as the subject matters of the method in Claims

21, 22 and 25-27, respectively.

h) **In Regarding to Claim 56**: *Anderson* further disclosed the processor is arrange to

handle a number of parallel channels in which information is sent in the communication network,

the number being based on an average of the processing required for performing the algorithm

(see col.1 lines 38-48).

8.   **Claims 23, 24, 51** and **52** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Anderson et al. (US Patent No. **5,628,013**) and *Witte et al.* (US Patent No. **5,655,120**), in view of

Paneth et al. (US Patent No. **5,121,391**), as applied to claims 21 and 22 above, and further in

view of *the Admitted Prior Art Fig.1.*

    a) **In Regarding to Claim 23**: *Anderson* disclosed all aspects of these claims as set

forth in claims 21 and 22.

Anderson fails to explicitly disclose the echo cancellation algorithm function is divided

into sub-functions including at least one of: filtering, filter updating, double-talk detection,

non-linear processing, noise estimation, and network probing.

the Admitted Prior Art explicitly discloses appropriate components corresponding to such

filtering, filter updating, double-talk detection, non-linear processing, noise estimation, and

network probing. *(see Fig.1 Prior Art: blocks 102, 118, 104, 106, and 120, respectively).*

At the time of the invention, it would be obvious to a person of ordinary skill in the art to

combine such an echo cancellation algorithm function is divided into at least one of: filtering,

filter updating, double-talk detection, non-linear processing, noise estimation, and network

probing, as taught by *the Admitted Prior Art* with *Anderson*, in a purpose of noise echo canceling

during a telephone communication. The motivation for doing so would have been to provide the

process of *Anderson* with an echo cancellation in a communications or acoustic system.

Therefore, it would have been obvious to combine *the Admitted Prior Art* with *Anderson* in the

invention as specified in the claim.

    b) **In Regarding to Claim 24**: *Anderson* disclosed all aspects of these claims as set forth

in claims 21-23.

Anderson fails to explicitly disclose the subfunctions of filtering, non-linear processing,

filter updating, double talk detection, noise estimation, and network probing, taken in this

sequential order, are assigned degrees of severity or importance in decreasing and increasing

scales respectively.

However, it would have been an obvious matter of design choice to take in a sequential

order for a process of echo canceling, since such a modification would have involved a mere

change in a sequential order of a process. Based on the priority of an information for a

sequential order of a process is generally recognized as being within the level of ordinary skill in

the art.

c) **In Regarding to Claims 51** and **52**: these claims are rejected for the same reasons as

Claims 23 and 24, respectively because the claimed subject matters of the processor in Claims 51

and 52 are the same as the subject matters of the method in Claims 23 and 24, respectively.

Allowable Subject Matter

9.   **Claims 13 and 41** are objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

Response to Remarks

10.   Applicant's arguments with respect to underlined amended claims 1-56 and new claims 57-61 have

been considered but are moot in view of the new ground(s) of rejection.

11.   In order to response properly to the independent amended claims, the Examiner decides

to change *Anderson et al.* (US Patent No. **5,628,013**) as a primary reference, and *Witte et al.* (US

Patent No. **5,655,120**) as a secondary reference, respectively, which is a change in order for these

references. Therefore, new ground(s) rejections are applied as set forth in the Office Action.

12.   Regarding to U.S Patent 5,655,120 to *Witte*, the Applicants argue that the reference of

Witte merely transfers jobs because of load; he does not tailor a jobs by invoking different

processes based on the load. The Examiner respectfully disagrees with the Applicants on this

argument because each of *Witte*'s multiprocessors processes a different function *(see col.2 line*

63 – col.3 line 3).

13.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from

the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the

mailing date of this final action and the advisory action is not mailed until after the end of the

THREE-MONTH shortened statutory period, then the shortened statutory period will expire on

the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will the statutory

period for reply expire later than SIX MONTHS from the date of this final action.

Examiner Information

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Anthony T Ton** whose telephone number is **571-272-3076**. The

examiner can normally be reached on M-F: 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Ken Vanderpuye** can be reached on **571-272-3078**. The fax phone number for the

organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

by: _____
Anthony T. Ton
Patent Examiner
January 9, 2005

PHIRIN SAM
PRIMARY EXAMINER